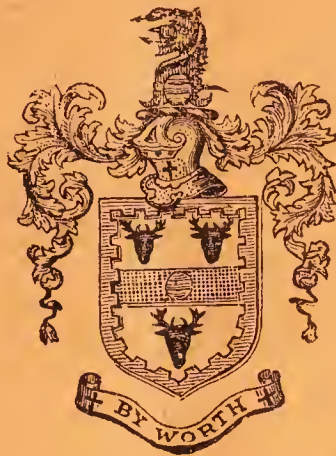


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Borough of Keighley.

ANNUAL REPORTS

OF THE

MEDICAL OFFICER OF HEALTH

AND THE

BOROUGH SANITARY INSPECTOR,

FOR THE

YEAR ENDING DECEMBER 31st, 1896.

[FEBRUARY, 1897.]

Keighley :

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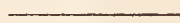
HEALTH COMMITTEE.

(Meets every alternate Wednesday at 7 p.m.)



CHAIRMAN :

MR. ALDERMAN ICKRINGILL.



THE WORSHIPFUL THE MAYOR (*Ex-Officio*).

MR. ALDERMAN HOLMES.

MR. COUNCLR. J. H. CRAVEN. MR. COUNCLR. P. GREENWOOD.

„ „ J. N. CLARKSON. „ „ H. HORNER.

„ „ C. H. FOULDS. „ „ M. HOWLEY.



MEDICAL OFFICER OF HEALTH :

WILLIAM SCATTERTY, M.A., M.D.




SANITARY INSPECTOR :

WILLIAM C. HALLER.



ASSISTANT INSPECTOR :

WILLIAM MITCHELL.



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THE FIFTEENTH
ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH
FOR THE
BOROUGH OF KEIGHLEY



TO THE MAYOR, ALDERMEN, AND
COUNCILLORS.

GENTLEMEN,

In accordance with the Order of the Local Government Board, Sec. 14, Art. 18, March, 1891. I beg to lay before you my Annual Report for the year ending 31st December, 1896.

Details of Borough.—The Borough of Keighley, situated in the valley of the River Aire, about a mile above its confluence with the River Worth, is built upon the millstone grits—a hard sandstone found in the coal measures. The

town is intersected by the Worth and its tributary the North Beck, and extends from the level of these streams up the surrounding hill-sides, whilst nearer the hill-tops are the villages of Braithwaite, Hainworth, and Thwaites Brow.

Acreage of Borough	...	3,600 acres
Population at Census of		
1891	...	30,811
Estimated Population for middle of		
1896	...	38,000
Houses inhabited at Census of 1891	...	6,415
Houses inhabited at end of 1895, about	...	7,600
New Houses certified fit for habitation		
during 1896	...	222
Rateable Value	...	£107,324 6 3

As a point of general interest, it may be mentioned that the year just ended has been marked by the lowest death-rate recorded since the incorporation of the Borough. It is possible, however, that this satisfactory result may in a measure be accounted for by the fact that the extended Borough includes part rural district, and that in rural districts the death-rate is generally less than in Urban or thickly-populated districts.

Another subject for congratulation is that the past year has surpassed former years in the activity shown in the building industry in the town. Some idea of this progress may be gathered from an enumeration of the new houses occupied during the year. The following were certified fit for habitation :—North-East Ward, 66 houses ; North-West, 59 ; East, 35 ; West, 34 ; South, 33 ; Central, 1.

GENERAL.

Water Supply.—The Keighley water supply is derived from springs, and partly from moorland gathering ground, and is distributed by four separate services known as Watersheddles, Calversyke, Park Lane, and Green House. Of these the first and chief supply comes from the gathering grounds on Stanbury and Trawden Moors, some seven miles of Keighley

and is filtered through Welsh coke, sand, lime-stone and Polarite at Oldfield. The other supplies obtained from springs are not filtered or otherwise treated before distribution to consumers.

The filter beds at Oldfield have now been in use for nearly three years and seem to be giving satisfaction. I have frequently examined the water for lead with negative results—in fact, the slightly alkaline reaction arising from the limestone in the filter beds negatives the probability of any injurious action on lead pipes. During the summer large accumulations of peat, which had been carried into the reservoir by storm waters, have been removed. As I pointed out in my last report this accumulation of peaty debris was a constant source of danger, in as much as it yielded an organic acid (the result of bacterial changes), which would act on lead unless neutralized by the addition to the water of lime or other alkali. This neutralizing agent, must of course be continually renewed otherwise it would become exhausted, or, what is more probable in a moorland water such as ours, the limestone in the filter beds and in the storage reservoir would become coated with a film of slime which would prevent the water coming into contact with the limestone. In this way the organic acid generated in the peat would cease to be neutralized, and the plumbo-solvent action of the water would soon make itself felt on the health of the people.

In last year's report it was noted that nearly all parts of the Borough were supplied from the Corporation mains,—the principal exceptions being Braithwaite, Damens, Moss Carr, and Thwaites Brow. The two latter places no longer form an exception, as the mains have been extended to the Long Lee District, and the houses there either have already got connected or have been instructed to do so.

During this year only one instance of a water supply having been polluted has arisen, viz.: at Smithfield Terrace, where the spring water was contaminated by the overflow from a sump. The nuisance complained of was of course promptly removed, but had not the soap-suds told their own tale serious results might have occurred before the pollution was detected or even been suspected.

Sewerage and Sewage Disposal.—Considerable progress is being made with the new intercepting sewer which is being laid along the bed of the Worth. In last report

I stated that at Marley the Sewage Farm was receiving the sewage from half the town, and since then 1770 lineal yards of a 15-inch iron pipe intercepting sewer has been laid, and the various sewers are being connected along this course. In addition, some 2160 lineal yards of earthenware pipe sewer has been laid by the Corporation, together with extensive sewers laid by private companies in new streets. Notwithstanding the large amount of work done, there is urgent need for a rapid extension of the intercepting sewer both to Ingrow, and up the North Beck to Dam Side and Pinfold.

At Ingrow, a house-to-house inspection of Ebenezer Square was made by the Health Committee, and, although the Sanitary Inspector and I had reported upon the insanitary condition of the midden system there, it required ocular demonstration to bring home the fact that Ebenezer Square was a second Pinfold. Nothing short of the substitution of water-carriage for the privy-midden will meet the exigencies of this neighbourhood, and, the sooner the sewer is completed as far as Ingrow, the better for the health and comfort of the people there.

At the risk of being considered importunate, I must repeat what I said last year, to the effect that there are 5,000 excreta tubs in use in the Borough for the collection of night-soil, which, from a health-point, could be far better removed by water-carriage. If the £700 which is annually expended in the weekly collection and removal of excreta from tubs and mill-tanks was expended in the conversion of the pail-system into waste water-closets, not only would the sanitary condition of the Borough be improved, but in a few years there would be a distinct pecuniary saving to the town.

Isolation Hospital.—Except for the laying out of the grounds the new Fever Hospital at Morton Banks may be spoken of as completed, and may at any time be declared open for the reception of Infectious cases. In its erection and furnishing, no expense has been spared which would tend either to the more efficient treatment of disease or to the comfort of the inmates, and, this being so, it is hoped that full advantage may be taken of it by those unfortunately attacked by Infectious disease. In hospitals not only is the mortality less than in private houses—a point of importance to the invalid, but the likelihood of spreading infection is practically done away with,—a fact to be remembered by those who would otherwise be exposed to the risks of imperfect isolation.

Early notification should be followed by prompt removal of the patient, in order to stamp out a possible or probable focus of infection, and it is therefore desirable that in infected households as little delay as possible takes place between becoming aware of the existence of infectious disease and consenting to the removal of the invalid.

It is very satisfactory to record that the whole Union is now incorporated in the Joint Board—Oakworth, the last outstanding Authority, having joined.

Slaughter-Houses and Meat Inspection.—This department is now receiving more attention than formerly, but still not so much as the importance of the subject demands. Everyone knows that good food, pure water, fresh air, and a healthy home are essential for the health of the individual as well as of the community; but how few consider anything more is required in their weekly meat supply than that it should be tender and palatable. The thought that it might come from a tuberculous animal never crosses the mind, and, consequently, while an inspector of nuisances is considered necessary to look after the drains, a meat inspector is for the most part considered a luxury, if not a superfluity.

There are upwards of a dozen and a half slaughter-houses in the Borough, and although these are inspected as frequently as possible, no one can say that such inspections are commensurate with the requirements. Comparisons are said to be odious, but still a good purpose may be served by noting that at Shipley, Ilkley, and Brighouse—towns all less than Keighley—there are public abattoirs where efficient supervision and inspection can be made, and at Brighouse a practical man has been appointed to devote his whole time to the duties of the public slaughter-house.

Common Lodging Houses.—Last year I reported that these houses were in a fairly satisfactory condition, with perhaps one exception, and, with a view to reduce the evils connected with this extensive system of housing the less fortunate classes, the Health Committee have made several visits of inspection both during the day and in the small hours of the morning. The exception referred to above was condemned as unfit for human habitation, and has since been demolished. Another house was closed as being so dirty as to constitute a nuisance and a menace to health, while in several other cases measures less stringent but still

commendable were adopted to lessen the dangers attendant upon overcrowding and bad ventilation. The Committee also visited the model lodging-house belonging to the Huddersfield Corporation, and, as a result of that visit, the advisability of erecting a Borough Lodging House has been considered,—further action at present being postponed until a suitable site could be obtained.

Housing of the Working Classes.—Although this is a subject annually receiving more attention from the Health Committee and their staff, there is much to be done before many of the dilapidated dwellings along the course of the North Beck are in a satisfactory condition. In many cases the walls are damp, the floors decayed, the drainage a nonentity, and the privy accommodation an undefined area, in the direction of which all kinds of refuse are thrown. During the year two such houses have been closed, while a third has been closed on account of over-crowding. In the same locality, in the case of rooms let as furnished apartments, steps have been taken to enforce the Bye-laws, and nuisances from over-crowding and insufficient privy accommodation have been remedied.

Bakehouses.—Periodic inspections are made when, as a rule, the various houses are found satisfactory. One bakehouse, however, had to be closed owing to its insanitary surroundings.

VITAL STATISTICS.

Births.—During the year there were registered 1,156 births. Of these, 563 were males and 593 females. After making allowance for the increasing size of the Borough, this is proportionally the largest number of births recorded. The illegitimate births numbered 56, compared with 34 in the previous year, and 40 in 1894. The natural increase in the population by the excess of births over deaths is 482, compared with 285 in 1895, and 262 in 1894, in the old Borough. The birth rate equals 28·4. In 1895 it was 27·0, and in 1894 it was 26·3. In the 33 larger English towns for 1896 the rate was 30·7.

Deaths.—The deaths registered during the year were 695. Of these, 346 were males and 349 females. From the total deaths we may deduct 21 deaths occurring in the Hospital and Infirmary of persons not belonging to the Borough. This leaves 674, which, on an estimated population of 38,000, gives a death rate of 17·7,—the lowest rate recorded since the incorporation of the Borough. This result, however, does not give the properly corrected death rate, inasmuch as we have deducted deaths occurring in the Borough, but not belonging to it; but have not added deaths of inhabitants which may have taken place elsewhere.* The death rate for the previous year was 18·4, and in 1894 it was 18·0. In the 33 larger towns it was 18·9.

Zymotic Deaths.—The seven principal Zymotic diseases—Small-pox, Measles, Scarlatina, Diphtheria, Whooping Cough, Fever, and Diarrhœa—are registered as the cause of 59 deaths. The previous year there were 39 such deaths, compared with 59 in 1894, and 72 in 1893. The Zymotic death rate is 1·5. Excepting in 1895, when the rate was 1·17, this is the lowest rate recorded during the past ten years. In 1894 it was 1·8, and 2·2 in 1893. For 1896, in the 33 large English towns, the zymotic death rate is 2·86.

*Since this was compiled 6 deaths are reported as having occurred in Menstone Asylum.

Of the Zymotic diseases, Whooping Cough with 21 deaths was, as usually found, the most fatal. Typhoid Fever followed with 14 deaths, then Measles with 12, and Diarrhœa with 9. Before congratulating ourselves upon the lowness of the death rate from Zymotic diseases, we must face the fact that those 59 deaths were due to what are frequently called "preventable diseases." With regard to Measles and Whooping Cough, I have in former reports stated that the longer a child can be prevented from catching the disease, the less likely is it to do so, and even if it should be attacked every year the attack is delayed, reduces the danger to life, and also the risk of troublesome complications. It is well further to remember that the heavy death-roll claimed by Measles proves it is not the simple complaint which many people think, and that children when not kept sufficiently warm readily develop Bronchitis, and what might otherwise have been a slight attack becomes a very serious or even a fatal one.

Table.—Death rates from Zymotic diseases :—

	1896.	1895.	England and Wales. 1895.	83 Larger English Towns. 1896.
Whooping Cough	·55	·12	·30	·57
Measles ...	·31	·15	·37	·71
Diarrhœa ...	·23	·57	·89	·79
Small-pox ...	nil.	nil.	·01	·00
Scarlet Fever ...	nil.	·09	·15	·22
Diphtheria ...	nil.	·12	·25	·38
Fever ...	·44	·30	·17	·19

Table.—Births, Deaths, General Death rate, and Zymotic Death rate for the past ten years :—

Year.	Estimated Population.	Births.	Deaths.	Zymotic Death rates	Death rates.	Infant mortality.
1887	28,594	914	666	3·4	23·3	174
1888	29,168	849	637	4·0	21·8	146
1889	29,756	878	602	1·9	20·2	163
1890	30,354	989	707	2·9	23·3	158
1891	30,965	970	664	2·1	21·4	165
1892	31,530	907	601	1·7	19·0	158
1893	32,070	922	616	2·2	19·2	158
1894	32,750	862	600	1·8	18·0	190
1895	33,202	899	639	1·1	18·4	177
1896	38,000	1156	695	1·5	17·7	163

Age Mortality.—During the past year 189 children died under 1 year of age. In the previous year there were 160, and 164 in 1894. Between the ages of 1 and 5 years there were 87 deaths, compared with 75 in 1895, 101 in 1894 and 84 in 1893. Thus it will be seen that notwithstanding the increasing population the number of deaths between 1 and 5 compares favourably with previous years, and in the next section, *i.e.* at ages between 5 and 25 the deaths were not simply fewer relatively but actually fewer than in 1893 and 1894. They were last year 59, compared with 52 in 1895, 62 in 1894 and 82 in 1893. At ages between 25 and 65 there were last year 221 deaths, compared with 195 in 1895, and 133 in 1894. At ages over 65 last year there were 139 deaths, compared with 157 in 1895, 146 in 1894, and 139 in 1893. This last comparison is not so favourable as at first sight it appears,—for where the “expectations of life” is high, or in other words, where a great proportion of deaths occur at advanced ages the probability is that the sanitary conditions under which the community lived were good.

Infant Mortality.—The mortality among children under 1 year was in the proportion of 163 to every 1,000 births registered. This rate is lower than in the two previous years, being 177 in 1895, and 190 in 1894, but higher than in 1893 when it was 158. In the West Riding for 1895 the rate was 163, and in the Urban Districts of the West Riding, 169. For England and Wales it was 161.

Table.—Death-rates in the several Wards, the populations being estimated approximately :—

	Population.	Births.	Birth-rate.	Death	Death-rate.
Central	6,640	147	22·1	103	15·5
East	6,580	259	39·3	129	18·0
North-East.....	5,290	181	34·2	75	14·1
North-West ...	6,860	168	24·3	89	12·9
West	7,160	218	30·4	108	15·0
South	5,230	183	34·9	112	21·4
Hospital.....	40			21	Including non-residents
Infirmery	200			58	
TOTAL	38,000	1,156	28·4	695	18·2

Uncertified Deaths.—The number of deaths registered without being certified, either by a medical man or by the coroner, is slightly on the increase, compared with the previous year.

53	deaths	were	uncertified	in	1891	;	a	percentage	of	7·9
51	„	„	„	„	1892	„	„	„	„	8·6
62	„	„	„	„	1893	„	„	„	„	9·8
45	„	„	„	„	1894	„	„	„	„	7·4
34	„	„	„	„	1895	„	„	„	„	5·3
41	„	„	„	„	1896	„	„	„	„	5·9

In the 33 largest English towns the percentage of uncertified deaths is only 15, a comparison anything but favourable to our Borough.

Inquests.—Last year 19 inquests were held, compared with 9 in 1895 and 18 in 1894.

SPECIAL DISEASES.

Small Pox.—Two cases of Small Pox, a man and his wife, were notified in July in the North-West Ward. The woman had recently returned from the Hornsey District in London, bringing the disease in a mild form with her and subsequently infecting her husband. On hearing of the outbreak, I communicated with the Medical Officer of Health for Hornsey, who, on making the necessary inquiries, discovered five cases, which otherwise would have escaped detection until they had sown the seeds of possibly a large epidemic. The two Borough cases were promptly removed to the Small Pox Hospital, and their house and belongings thoroughly disinfected. All persons who had been exposed to infection were kept under supervision so that the first symptoms of disease in them might be immediately followed by isolation, but happily the measures adopted were sufficient to stamp out the threatened invasion.

Measles.—During the greater part of the year the Borough was practically free from this complaint, but in the early part of November a sudden outbreak in the Ingrow and New Road Side Districts compelled the Health Committee to close the Wesley Place Infant School for a period of three weeks. The suddenness of this epidemic may be understood from the fact that in less than a week the average attendance in the Infant

Department dropped from 260 to 74, practically all the absentees being down with measles.

This disease is not scheduled as notifiable under the Infectious Diseases Notification Act, and apart from the question of economy both in notification fees and isolation hospitals, the fact that the disease is infectious before the rash shows itself means that as a Sanitary Authority we cannot cope with an epidemic so satisfactorily as might otherwise be done. At the same time a knowledge of the first cases occurring in a district would materially assist in combating a possible epidemic. For that reason it is a matter for your consideration as to whether notification of infected *houses* should not be made compulsory. The public is being taught to look upon notifiable diseases as preventable diseases, and if the same view were taken with regard to measles, a blow would be struck at the fatalist idea that children must of necessity suffer from measles sooner or later. Fortunately this idea is an erroneous one, and even were it correct, by all means let the attack come not sooner but later. Of the 12 deaths registered as due to Measles, 11 occurred in children under 5 years of age. For comparison with former years it might be stated that in 1895 there were 5 deaths, in 1894, 28; and in 1893 there were 13. The rate of mortality from Measles was equal to $\cdot 31$ per thousand compared with $\cdot 71$ in the 33 larger English towns.

Scarlet Fever.—In my report for 1895, the subject of Scarlet Fever was introduced with the statement that 54 cases were reported, being the least number since the Notification Act was adopted. This past year has broken that record four-fold, the number of cases reported only been 13. Beginning with 1890, the cases notified were 427, 93, 131, 68, 57, 54, and lastly, 13. Although the Borough has thus enjoyed a very unusual immunity during the past year, we must not forget that very frequently periods of five or six years elapse between serious epidemics, and consequently this coming year probably may find us face to face with an epidemic similar to what we experienced in 1890. The death rate per 1,000 from Scarlet Fever was nil; in the 33 larger English towns it was $\cdot 22$.

Diphtheria.—The continued decrease in the number of cases of Diphtheria is very satisfactory: 13 cases being reported, compared with 16 cases in 1895, 19 in 1894, and

TABLE B.

BOROUGH OF KEIGHLEY.

NOTIFICATION OF INFECTIOUS DISEASES.

Number of Cases reported, number of Houses in which they occurred, and number of Deaths, distinguishing Diseases and Wards,
for Year ending 31st December, 1896.

NAME OF DISEASE.	Central Ward.				East Ward.				North-East Ward.				North-West Ward.				West Ward.				South Ward.				Totals for Borough.			
	CASES.		Houses	DEATHS.	CASES.		Houses	DEATHS.	CASES.		Houses	DEATHS.	CASES.		Houses	DEATHS.	CASES.		Houses	DEATHS.	CASES.		Houses	DEATHS.	CASES.		Houses	DEATHS.
	under 5	over 5			under 5	over 5			under 5	over 5			under 5	over 5			under 5	over 5			under 5	over 5			under 5	over 5		
SMALL-POX													2	1											2	1		
SCARLET FEVER	3	1	3			1	1		1	1	2						2	2	3		2		2		8	5	11	
DIPHTHERIA		1	1		1		1			1	1		1	3	3		1	2	3			3	1		3	10	10	
MEMBRANOUS CROUP																	1		1	1	3		3	2	4		4	3
ERYSIPELAS		7	7		1	4	5			7	7			8	8	1		18	12	1	1	9	9		2	53	48	2
TYPHOID FEVER		5	5	3		22	18	4		5	4	1	1	5	6	2		6	5			13	11	4	1	56	49	14
CONTINUED FEVER						1	1			1	1										1	1			3	3		
PUERPERAL FEVER		2	2							1	1	1						1	1			2	2	2		6	6	3
TOTALS	3	16	18	3	2	28	26	4	1	16	16	2	2	18	18	3	4	29	25	2	6	28	29	8	18	135	132	22

CASES REPORTED, DISTINGUISHING SEX AND AGE, FOR YEAR ENDING 31st DECEMBER, 1896.

	SMALL-POX.		SCARLET FEVER.		DIPHTHERIA		MEMBRANOUS CROUP.		ERYSIPELAS.		TYPHOID FEVER.		CONTINUED FEVER.		PUERPERAL FEVER.	TOTAL.	
AGES.	Cases.		Cases.		Cases.		Cases.		Cases.		Cases.		Cases.		Cases.	Cases.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	F.	M.	M.
0-1	1	...	1	...	...	...	...	...	...	2
1-5	2	6	1	1	...	3	...	...	1	...	...	...	...	8	7
5-10	1	3	1	...	...	...	...	...	5	6	1	...	...	8	9
10-15	1	2	...	...	4	...	1	2	...	...	...	6	4
15-25	1	...	...	3	...	...	2	7	9	10	...	1	2	12	23
25-35	1	1	...	...	1	1	...	...	5	3	2	6	...	1	4	9	16
35-45	1	...	...	4	6	10	1	...	...	...	14	8
45-60	1	...	...	...	7	7	3	...	...	...	...	11	7
60 upwards	1	7	1	...	...	...	...	2	7
TOTALS...	1	1	4	9	5	8	3	1	24	31	32	25	1	2	6	70	83

over 30 in each of the three preceding years. The cases occurred in all parts of the Borough, the greatest prevalence being in the West, South, and North-West Wards,—almost the very wards in which the fewest cases of Scarlet Fever occurred. Diphtheria is generally looked upon as a disease closely associated with school life, but as in the previous year, this means of propagation does not apply to the cases reported. Of the cases notified only one attended school, the others either being too young or having passed beyond the stage of school life. The rate of mortality was nil, compared with $\cdot 12$ for the previous year, and $\cdot 38$ for the 33 larger English towns.

Membranous Croup.—This complaint, which is frequently included under the heading of Diphtheria, was the cause of 3 deaths, four cases being reported. The fatal cases were all under 5 years of age. In the previous year there were 2 cases and 1 death. In 1894, 9 cases with 9 deaths; and in 1893, 10 cases with 5 deaths.

Whooping Cough.—This complaint was very prevalent in all parts of the Borough during the 2nd and 3rd quarters, and was registered as the cause of 21 deaths. All the fatal cases were under 5 years of age. Seeing the epidemic ran its course during the summer months, when lung complications were least to be expected, this heavy mortality is all the more to be regretted. The death rate corresponds to $\cdot 55$ per 1,000, compared with $\cdot 12$ in 1895, and with $\cdot 57$ in the 33 larger towns.

Diarrhœa.—The prevalence of this disease—which is not notifiable—can only be approximately estimated from the mortality returns; but, so far as can be judged, the cases were far less frequent and less severe than during the preceding year. In all 9 deaths were registered, compared with 19 in 1895. Of the 9 deaths, 8 occurred among children under 5 years. As usual, most of the cases were met with in autumn, and the Wards most affected were the West and East. The mortality from this complaint equalled $\cdot 23$, compared with $\cdot 57$ in 1895, and with $\cdot 79$ in the 33 larger towns. Although our diarrhœal death rate compared favourably with that of many towns, it is still probable that its prevalence may be largely dependent upon insanitary conditions surrounding the houses of many of the working classes.

That careless dieting is a frequent cause of Diarrhœa is incontestable ; but other important factors are the decaying animal and vegetable matter lying in dirty unpaved back yards and in uncleansed gullies, and the highly offensive excreta tubs and privy middens, which may still be counted by the thousand in our midst.

Typhoid Fever.—In the report of the County Medical Officer for 1895, the accumulated evidence of the various authorities in the West Riding is summed up thus :—“ Enteric or Typhoid Fever is now regarded as a filth disease and is more amenable than any other to improvements in sanitary arrangements.” That being so, the large number of cases occurring annually in Keighley is a proof of the existence of defective drainage and of accumulations of animal and vegetable refuse decomposing and polluting the air, soil, and water. Cases of Fever occurred in all parts of the town, but especially in the East and South Wards. In all 60 cases were notified (three being continued Fever). Of these, 23 were in the East Ward, 14 in the South, 6 in the North-East, the North-West, and the West and 5 in the Central. About one-third of the cases were reported from houses in which defective drains were found, and in 90 per cent. there were either excreta tubs or privy-middens within a few yards of the doors. It is only repetition to say that in houses where water carriage of excreta existed cases of Fever were conspicuously few.

In last year's report special reference was made to the endemic nature of Typhoid Fever in Victoria Street, and it was thought that a water supply obviously polluted was the most probable cause of the disease. However after this supply was disconnected there was a recurrence of cases. This led to a more thorough inspection of the infected area, and if the cause has not been found, at least an unexpected defect in the drainage system was unearthed. An arrangement of subsoil stone drains were found running under the cellars along the whole length of the block, and into these drains the sewage from a blocked gulley was discharging. This condition of things has been efficiently remedied, and, so far as known, everything has been done to render the houses free from insanitary defects.

A careful analysis of the cases failed to attach any suspicion to any of the milk supplies, and in the great majority of cases

the town's water was used—the exceptions being in the East Ward. Death-rate $\cdot 44$ per thousand, compared with $\cdot 30$ in 1895, and with $\cdot 19$ in the 33 large English towns in 1896.

Respiratory Diseases.—Bronchitis, Pneumonia and Pleurisy were registered as the cause of 138 deaths; compared with 179 during the previous year. Respiratory death-rate $3\cdot 6$; previous year, $5\cdot 3$ (England and Wales, $3\cdot 6$).

Phthisis.—Consumption was credited with 59 deaths, compared with 44 in the previous year. Death-rate $1\cdot 5$. In 1895 it was $1\cdot 3$, and in England and Wales, $1\cdot 4$. The popular idea with regard to this disease is still so crude that the following extract from last year's report seems excusable. "The disinfection of rooms occupied by consumptive patients is now recommended in order to destroy the germs which give rise to the disease. Where there is plenty of fresh air and light, efficient drainage and general cleanliness these germs find no suitable lodgment, but where houses are overcrowded, badly ventilated, and badly drained the seeds of disease find the conditions most favourable for their growth and activity. There is extremely little risk of infection from inhaling the breath of consumptive persons, but when the phlegm or sputum which is coughed up becomes dry and powdery, it may be carried about by the wind, and thus convey infection to those whose health is reduced by living amid insanitary surroundings."

Heart Disease.—No less than 59 deaths were attributed to heart affections—the same number as Phthisis.

Notification of Infectious Diseases.—The number of cases reported was 153,—a smaller number than in any former year since the Notification Act came into operation. Hitherto we have not been able to reap the full benefit of this Act from want of means of isolating the cases reported; but, now that the Joint Hospital is practically finished, it is to be hoped that prompt isolation following prompt notification may still further reduce the number of Infectious diseases occurring in our midst. Compared with the previous year, Scarlet Fever and Diphtheria have decreased, but Erysipelas and Typhoid have both shown considerable increase. In my report for 1895, it was stated as a remarkable fact that more cases of Erysipelas are notified in Keighley than in any non-county borough in the Riding. If that was true of the 45 cases

then reported, it is unfortunately probable to be again true when the number of cases have risen to 55.

Infected houses are visited as soon as possible after notification is received ; insanitary conditions, where found, are remedied ; and advice is given regarding isolation and the use of disinfectants.

The distribution of Infectious cases in the various Wards was as follows :—

North-East Ward	17 cases.
Central „	19 „
North-West „	20 „
East „	30 „
West „	33 „
South „	34 „
<hr/>	
Total,	153 cases.
<hr/>	

Further particulars as to the nature of the cases may be found in affixed Table B.

As regards the seasonable distribution of Infectious cases, there were notified in January, 23 cases.

February	9 „
March	9 „
April	18 „
May	17 „
June	10 „
July	11 „
August	12 „
Sept.	17 „
October	6 „
Nov.	8 „
Dec.	13 „
<hr/>	
Total,	153 cases.
<hr/>	

Recommendations.—Before closing, I might summarise some recommendations referred to in my report :—

1. Adoption of better means for meat inspection.
2. Rapid extension of intercepting sewer to Ingrow and up the North Beck.
3. Removal of privy middens and substitution of water carriage of excreta in place of the existing tub system.

WILLIAM SCATTERTY, *M.O.H.*



BOROUGH OF KEIGHLEY.



Report of the Borough Sanitary Inspector

For the Year Ending the 31st day of
December, 1896.



To the Chairman and Members of the Health
Committee.

MR. CHAIRMAN AND GENTLEMEN,

I beg to present to you my Sixth Annual Report upon the Sanitary Work of the Borough for the year ending the 31st December, 1896.

INFECTIOUS DISEASES NOTIFICATION AND PREVENTION ACT.

The following list shews the number of cases of Infectious Diseases reported under the provisions of the Infectious Diseases (Notification) Act during the past year, and for

comparison the number of cases reported during each year since the Notification Act came into operation is also given :—

NAME OF DISEASE	NUMBER OF CASES EACH YEAR						
	1890	1891	1892	1893	1894	1895	1896
Scarlet Fever	427	93	131	68	57	54	13
Typhoid Fever	72	38	80	33	32	46	57
Diphtheria	62	36	31	34	19	16	13
Erysipelas	45	45	38	43	44	45	55
Membranous Croup ...	1	1	7	10	7	2	4
Puerperal Fever	4	2	6	8	6	4	6
Continued Fever.....	—	1	3	—	1	—	3
Small Pox	—	—	8	72	1	—	2
Cholera	—	—	—	2	—	—	—
Totals.....	611	216	304	270	167	167	153

The following list shows the number of houses in which cases of Infectious Disease occurred during the year :—

NAME OF DISEASE.	NO. OF CASES	NO. OF HOUSES
Scarlet Fever	13	11
Typhoid Fever	57	49
Diphtheria	13	10
Erysipelas	55	48
Membranous Croup ...	4	4
Puerperal Fever	6	6
Continued Fever.....	3	3
Small Pox	2	1
Totals.....	153	132

Five of the 57 cases of Typhoid Fever were imported from other towns, and 6 other cases were probably due to polluted water. At 19 of the houses in which Typhoid Fever occurred, defective drainage was discovered, 11 of the cases were reported from the newly added district at Woodhouse, Wesley Place and Spring Bank.

The Water Supply to the houses at Woodhouse and Wesley Place was found to be defective, and the Corporation Water-mains were extended to those districts, and Notices have been served requiring the owners to connect the houses therewith.

The Union Workhouse and Infirmary were responsible for 2 cases of Typhoid Fever, 1 of Puerperal Fever, and 8 of Erysipelas.

Two cases of Typhoid Fever were again reported from Victoria Street, a block of 8 houses in which there have been 14 cases of Typhoid Fever since 1890, viz. :—3 cases in 1890; 1 case in 1891; 1 case in 1893; 7 cases in 1895; and 2 cases in 1896. The whole of the drains to these premises have been overhauled during the past year, and new subsoil water drains have been provided separate from the rest of the house drains.

The ground upon which this property is built is very wet, and subsoil drains had been laid under the whole of the basement floors with connections into syphon traps in two of the cellar window areas, into which the cellar slopstone waste pipes also discharged. These traps it was found had blocked from time to time and sewage from the cellar slopstones had been forced under the basement floors.

The owner has spared no expense in making the drainage as good as possible, and he has also had the paper stripped off the walls of the infected houses, after we had disinfected them and given everything a thorough cleansing. The walls and ceilings were whitewashed and the woodwork painted.

All cases of Infectious Diseases reported, are visited as early as possible, and steps are taken to remedy any defects in drainage, or any other nuisances that may be discovered and as soon as the case terminates if it be Scarlet Fever, Diphtheria or Typhoid Fever, the premises are disinfected by burning Sulphur in the rooms, 1 lb. to every 1000 Cubic Feet of Air Space.

96 Houses were disinfected in this manner during the past year. To applicants for disinfectants we also supplied 80 gallons of Disinfecting Fluid and $1\frac{1}{4}$ tons of Carbolic Powder.

NUISANCES.

The immense amount of work accomplished under this heading and the nature of the nuisances dealt with will be seen from the following table:—

Nuisances left on books unabated, December, 1895	125
„ reported during 1896	966
	<hr/>
Total number of nuisances dealt with	1091
	<hr/>

NATURE OF NUISANCES ABATED.	Number.
Defective drains repaired, cleansed and trapped	443
Blocked or untrapped drains from street	78
Gratings opened and trapped	
Houses with insufficient drainage, supplied	33
with slopstones and drains	
Houses without a proper supply of water,	57
supplied from Town's mains	
Houses with insufficient privy accommodation,	50
supplied with Water-closets and Dry Ash-	
places	
Dilapidated privies and ashplaces repaired ...	62
Filthy privies cleansed	8
Offensive accumulations removed	18
Nuisances from keeping of swine, (removed	5
under notice.)	
Miscellaneous Nuisances abated	43
	<hr/>
Total number abated	797

Left on books in hand at end of year:—

Defective drainage to remedy... ..	104
Slopstones and drains to provide	25
Houses without a proper supply of water at	8½
Wesley Place and Thwaites Brow	
Midden privies to alter to W.C.'s and Houses	67
without sufficient privy accommodation ...	
Miscellaneous matters... ..	14
	<hr/>
	294
	<hr/>
Total number on books for the year	1091
	<hr/>

The figures for the previous 5 years were as follows:—
1895, 849 ; 1894, 789 ; 1893, 796 ; 1892, 750 ; 1891, (my first year in Keighley.) 685.

Works for the abatement of 328 nuisances arising chiefly from defective drainage were executed by our own staff of men at a cost of £846 19s. 7d, all of which is of course recoverable from the owners of the premises upon which the work has been done. The cost of this class of work executed by us in the previous year (1895) was £473 10s. 0d.

209 complaints of nuisances were made at my office all of which have received attention.

MIDDEN PRIVIES, ETC.

19 Midden privies and ashpits supplying accommodation for 33 houses have been converted into Waste Water or Latrine Closets, 17 privies upon the pail system, accomodating 37 houses have also been converted to Water Closets.

SMOKE NUISANCES.

During the year I made 17 reports to you upon observations taken of chimneys in connexion with Works in the Borough, these reports embraced observations of 79 chimneys each.

By your instructions Notices have been served upon 5 firms requiring them to abate smoke nuisances at their works, and letters of caution were also sent to 16 other firms.

Legal proceedings were ordered to be taken against 2 firms, but the works necessary to abate the nuisances having been executed before the cases got into court, no further steps were taken in the matter and we have had no cause for complaint against them since.

REFUSE COLLECTION.

The quantity of household refuse collected was as follows, and for comparison I also give the figures for the previous year :—

	1896	1895
	<hr/>	<hr/>
Dry Ashes from tubs 	8294	7258
Excreta from pails and mill tanks	2798	2700
Midden stuff 	1281	695
	<hr/>	<hr/>
Total number of loads collected	<u>12373</u>	<u>10653</u> last year

It will be seen that although we have abolished 19 privy Middens during the year we removed 586 more loads of midden stuff than last year. This is due to the large number of Midden privies and ashpits to be found in the newly annexed district at New Road Side, and the large increase in the number of loads of Pail and Ash-tub contents is also largely due to the extension.

The sales of Excreta realised £12 9s. od., as against £9 2s. od. in 1895, and £32 10s od. in the previous year.

The cleansing of Closets, Ashplaces, etc., cost us last year £2,140 as against £1,663 in 1895, and £1,410 in 1891.

We also collected, removed and destroyed 52 lbs. of veal (condemned as unsound), 6 stones of bad fish, the carcasses of 33 pigs dead from Swine Fever, 22 dogs, and 3 cats; also 48 mattresses and 2 beds.

STREET CLEANSING.

Some idea of the work done in this Department may be gathered from the following figures :—

Sweepings collected 	1,923 loads.
Water used for Street Watering and Cleansing 	3,091 loads.
Sand and Ashes put on streets during frosty weather ...	44 loads.

The 3,091 loads of water represent about 865,480 gallons. As far as possible the swilling and cleansing of streets has been done by means of the water carts and machine brushes and this method we find, under ordinary conditions to work better than swilling with the hose pipes, and also uses much less water. On two or three occasions it has been found necessary to use the hose, but we have respected the wishes of the Water Committee and have been as careful as possible to prevent waste of water.

Special and regular attention has been paid to the cleansing of street gullies in all paved public and private streets, and very few complaints respecting blocked gullies have been received,

SLAUGHTER HOUSES AND MEAT INSPECTION.

We have now within the Borough 17 Private Slaughter Houses (13 Registered and 4 Licensed). They have all been as in previous years systematically and frequently visited, and as much time as possible has been devoted to this very necessary and important work.

Your Regulation requiring all Butchers to give me Notice whenever they find anything slaughtered to be diseased, has been strictly observed. Fifteen carcasses of beef slightly affected with Tuberculosis thus came under my notice during the year. The carcasses were very carefully dressed and all diseased organs and parts were taken charge of and destroyed, as recommended by the "Royal Commission on Tuberculosis." None of the carcasses were found to be so diseased as to justify their entire destruction.

One Butcher drew my attention to the carcase of a calf which he had killed, and which he thought was "not quite right." The carcase upon examination by the Medical Officer of Health and myself, was found to be totally unfit for food and it was by consent of the owner, removed and destroyed.

On another occasion I was requested to examine the carcasses of two pigs killed at a Slaughter House and they were also with the consent of the owner, removed and destroyed.

No diseased or unsound meat, fish or vegetables were found exposed for sale during the year.

DISEASES OF ANIMALS ACT, 1894.

Swine Fever Order, 1895.—There were 24 outbreaks of suspected Swine Fever during the year, necessitating the service of 266 Notices upon the owners of affected and adjacent premises. Copies of these Notices were, as required by the Order sent to the Board of Agriculture and to the Superintendent of Police, 31 pigs either died or were destroyed whilst suffering from the disease, and all were disposed of by being burnt or buried.

Sheep Scab Order, 1895.—There were two outbreaks of Sheep Scab affecting 4 Sheep only.

Anthrax Order, 1895.—One pig and one cow were found upon Post Mortem examination by Mr. Carter your Veterinary Inspector to have died from Anthrax. The Provisions of the Order of the Board of Agriculture, as to burial of the carcasses in quicklime, and the disinfection, limewashing and cleansing of the premises at the Corporation's expense were strictly observed.

Rabies Order, 1895.—There were no cases of Rabies during the year.

Mr. Benjamin Grayson, Superintendent of Police, has supplied to me the following particulars with respect to the number of Dogs seized and persons proceeded against under the provisions of the Muzzling Regulations in force during the early part of the year.

Re DOGS.

January 1st to December 31st, 1896.

Number of Dogs seized	...	...	...	17
„ „ destroyed	...	...	...	14
„ „ restored to owners...	...	...	...	3
Number of persons reported	...	...	...	16
„ „ proceeded against	...	...	...	6
„ „ fined	...	...	...	6

In addition to the above, 20 dogs were destroyed at the request of their owners.

(Signed,)

BENJAMIN GRAYSON,

Superintendent of Police.

DAIRIES, COWSHEDS AND MILKSHOPS.

We have now upon the Register 27 Cowkeepers, 57 Purveyors of Milk, and 1 Dairyman.

PETROLEUM ACT.

11 firms were licensed to store Petroleum in quantities varying from 1 to 250 gallons.

REGISTERED COMMON LODGING HOUSES.

The following list shews the number of Registered Common Lodging Houses within the Borough :—

Register No. of House.	NAME AND ADDRESS.	Bedroom accommo- dation.
		Persons.
2	Dominic Dagostino, High Street	10
3	William Harrison, Turkey Street and Leeds Street	12
4	Wignall & Anderton, "The New Model"... ..	189
5	Joseph Dawson, Cabbage House	33
6	Mrs. Bartlett, High Street	20
7	„ Baptist Square	37
8	William Oliver, Allison Square	54
9	Stephen Tatham, Sun Street	10
11	George Parke, "The Borough Model"	87
Total accommodation ...		452

Two old established Registered Common Lodging Houses, ("The White House," Hanover Street, and "The Barracks," Mill Street,) with accommodation for 36 and 59 persons respectively, have been closed during the year. The furnishings, beds, bedding, etc., in both these houses were in a very dilapidated and uncleanly condition, and the premises were of

themselves unfit for the purpose for which they were used. Both premises were closed by the owners after resolutions passed by the Council, that applications be made to the Magistrates for closing orders.

The whole of the houses on the Register have been kept under strict observation, and I have made several night visits in order to ascertain whether or no the number of lodgers received were in excess of the authorised accommodation.

The Committee will also remember that early in the year Mr. Councillor Horner, Mr. Councillor Howley, the Medical Officer of Health, and I, made a midnight inspection of all the Registered Lodging Houses in the Borough, including the "White House" and "The Barracks," which were afterwards closed.

The number of persons authorised to be received into the Lodging House Registered No. 3 has been reduced from 18 persons to 12, and the remainder of the Common Lodging Houses have been kept in a fairly satisfactory condition.

THE SHOP HOURS ACT, 1892.

Towards the latter part of the year steps have been taken to enforce the provisions of this Act within the Borough.

Notices to the persons interested under the Act have been given, by handbills distributed throughout the town, and in my next Report I hope to give the number and nature of the Trades in the Town to which the Act has been applied.

In concluding this report, I beg to thank Mr. Benjamin Grayson, the Superintendent of Police, for the assistance his men have rendered to me and the Committee when making midnight inspections of the Common Lodging Houses, and I would also take this opportunity to once more acknowledge my

indebtedness to Mr. William Mitchell, for his most valuable and ever ready assistance in carrying out the various and ever increasing duties devolving upon my department.

I am, Gentlemen,

Your obedient servant,

WILLIAM C. HALLER.



